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RAW SEQUENCE LISTING DATE: 06/03/2002
PATENT APPLICATION: US/10/041,977 TIME: 10:31:39

Input Set : N:\Crf3\RULE60\10041977.raw
Output Set: N:\CRF3\06032002\J041977.raw

SEQUENCE LISTING

3 (1) GENERAL INFORMATION:

- 5 (i) APPLICANT: Nicolette, Charles A.
- 7 (ii) TITLE OF INVENTION: A METHOD FOR IDENTIFYING CYTOTOXIC
8 T-CELL EPITOPES
- 10 (iii) NUMBER OF SEQUENCES: 11
- 12 (iv) CORRESPONDENCE ADDRESS:
- 13 (A) ADDRESSEE: GENZYME CORPORATION
- 14 (B) STREET: One Mountain Road
- 15 (C) CITY: Framingham
- 16 (D) STATE: Massachusetts
- 17 (E) COUNTRY: USA
- 18 (F) ZIP: 01701

ENTERED

20 (v) COMPUTER READABLE FORM:

- 21 (A) MEDIUM TYPE: Floppy disk
- 22 (B) COMPUTER: IBM PC compatible
- 23 (C) OPERATING SYSTEM: PC-DOS/MS-DOS
- 24 (D) SOFTWARE: PatentIn Release #1.0, Version #1.30

26 (vi) CURRENT APPLICATION DATA:

- C--> 27 (A) APPLICATION NUMBER: US/10/041,977
- C--> 28 (B) FILING DATE: 09-Jan-2002
- 29 (C) CLASSIFICATION:

32 (vii) PRIOR APPLICATION DATA:

- 33 (A) APPLICATION NUMBER: US/08/989,195
- 34 (B) FILING DATE:

37 (viii) ATTORNEY/AGENT INFORMATION:

- 38 (A) NAME: Dugan, Deborah A.
- 39 (B) REGISTRATION NUMBER: 37,315
- 40 (C) REFERENCE/DOCKET NUMBER: GZ0106US

42 (ix) TELECOMMUNICATION INFORMATION:

- 43 (A) TELEPHONE: (508) 872-8400
- 44 (B) TELEFAX: (508) 872-5415

47 (2) INFORMATION FOR SEQ ID NO: 1:

49 (i) SEQUENCE CHARACTERISTICS:

- 50 (A) LENGTH: 8 amino acids
- 51 (B) TYPE: amino acid
- 52 (C) STRANDEDNESS: single
- 53 (D) TOPOLOGY: linear

55 (ii) MOLECULE TYPE: peptide

57 (iii) HYPOTHETICAL: NO

62 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 1:

W--> 64 Leu Xaa Xaa Xaa Xaa Xaa Xaa Val
65 1 5

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67 (2) INFORMATION FOR SEQ ID NO: 2:

69 (i) SEQUENCE CHARACTERISTICS:

70 (A) LENGTH: 8 amino acids

71 (B) TYPE: amino acid

72 (C) STRANDEDNESS: single

73 (D) TOPOLOGY: linear

75 (ii) MOLECULE TYPE: peptide

77 (iii) HYPOTHETICAL: NO

80 (ix) FEATURE:

81 (A) NAME/KEY: Region

82 (B) LOCATION: 8

83 (D) OTHER INFORMATION: /product= "OTHER"

84 /note= "Xaa at Position 8 is a positively charged residue"

87 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 2:

W--> 89 Arg Xaa Xaa Xaa Xaa Xaa Xaa Xaa

90 1 5

92 (2) INFORMATION FOR SEQ ID NO: 3:

94 (i) SEQUENCE CHARACTERISTICS:

95 (A) LENGTH: 9 amino acids

96 (B) TYPE: amino acid

97 (C) STRANDEDNESS: single

98 (D) TOPOLOGY: linear

100 (ii) MOLECULE TYPE: peptide

102 (iii) HYPOTHETICAL: NO

105 (ix) FEATURE:

106 (A) NAME/KEY: Region

107 (B) LOCATION: 2

108 (D) OTHER INFORMATION: /product= "OTHER"

109 /note= "Xaa at Position 2 is Glu or Asp"

111 (ix) FEATURE:

112 (A) NAME/KEY: Region

113 (B) LOCATION: 9

114 (D) OTHER INFORMATION: /product= "OTHER"

115 /note= "Xaa at Position 9 is Phe, Lys, or Tyr"

118 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3:

W--> 120 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa

121 1 5

123 (2) INFORMATION FOR SEQ ID NO: 4:

125 (i) SEQUENCE CHARACTERISTICS:

126 (A) LENGTH: 8 amino acids

127 (B) TYPE: amino acid

128 (C) STRANDEDNESS: single

129 (D) TOPOLOGY: linear

131 (ii) MOLECULE TYPE: peptide

133 (iii) HYPOTHETICAL: NO

138 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4:

W--> 140 Arg Xaa Xaa Xaa Xaa Xaa Xaa Leu

141 1 5

143 (2) INFORMATION FOR SEQ ID NO: 5:

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145      (i) SEQUENCE CHARACTERISTICS:
146          (A) LENGTH: 8 amino acids
147          (B) TYPE: amino acid
148          (C) STRANDEDNESS: single
149          (D) TOPOLOGY: linear
151      (ii) MOLECULE TYPE: peptide
153      (iii) HYPOTHETICAL: NO
156      (ix) FEATURE:
157          (A) NAME/KEY: Region
158          (B) LOCATION: 2
159          (D) OTHER INFORMATION: /product= "OTHER"
160 /note= "Xaa at Position 2 is Lys or Arg"
162      (ix) FEATURE:
163          (A) NAME/KEY: Region
164          (B) LOCATION: 8
165          (D) OTHER INFORMATION: /product= "OTHER"
166 /note= "Xaa at Position 8 is Leu or Ile"
169      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 5:
W--> 171      Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
172          1          5
174 (2) INFORMATION FOR SEQ ID NO: 6:
176      (i) SEQUENCE CHARACTERISTICS:
177          (A) LENGTH: 8 amino acids
178          (B) TYPE: amino acid
179          (C) STRANDEDNESS: single
180          (D) TOPOLOGY: linear
182      (ii) MOLECULE TYPE: peptide
184      (iii) HYPOTHETICAL: NO
187      (ix) FEATURE:
188          (A) NAME/KEY: Region
189          (B) LOCATION: 1
190          (D) OTHER INFORMATION: /product= "OTHER"
191 /note= "Xaa at Position 1 is Met or Leu"
194      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 6:
W--> 196      Xaa Xaa Xaa Xaa Xaa Xaa Xaa Lys
197          1          5
199 (2) INFORMATION FOR SEQ ID NO: 7:
201      (i) SEQUENCE CHARACTERISTICS:
202          (A) LENGTH: 8 amino acids
203          (B) TYPE: amino acid
204          (C) STRANDEDNESS: single
205          (D) TOPOLOGY: linear
207      (ii) MOLECULE TYPE: peptide
209      (iii) HYPOTHETICAL: NO
212      (ix) FEATURE:
213          (A) NAME/KEY: Region
214          (B) LOCATION: 8
215          (D) OTHER INFORMATION: /product= "OTHER"
216 /note= "Xaa at Position 8 is Phe or Tyr"

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219      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 7:
W--> 221      Glu Xaa Xaa Xaa Xaa Xaa Xaa Xaa
222          1          5
224 (2) INFORMATION FOR SEQ ID NO: 8:
226      (i) SEQUENCE CHARACTERISTICS:
227          (A) LENGTH: 8 amino acids
228          (B) TYPE: amino acid
229          (C) STRANDEDNESS: single
230          (D) TOPOLOGY: linear
232      (ii) MOLECULE TYPE: peptide
234      (iii) HYPOTHETICAL: NO
237      (ix) FEATURE:
238          (A) NAME/KEY: Region
239          (B) LOCATION: 8
240          (D) OTHER INFORMATION: /product= "OTHER"
241 /note= "Xaa at Position 8 is Phe, His, Trp, or Tyr"
244      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 8:
W--> 246      Xaa Pro Xaa Xaa Xaa Xaa Xaa Xaa
247          1          5
249 (2) INFORMATION FOR SEQ ID NO: 9:
251      (i) SEQUENCE CHARACTERISTICS:
252          (A) LENGTH: 7 amino acids
253          (B) TYPE: amino acid
254          (C) STRANDEDNESS: single
255          (D) TOPOLOGY: linear
257      (ii) MOLECULE TYPE: peptide
259      (iii) HYPOTHETICAL: NO
262      (ix) FEATURE:
263          (A) NAME/KEY: Region
264          (B) LOCATION: 1
265          (D) OTHER INFORMATION: /product= "OTHER"
266 /note= "Xaa at Position 1 is Ile or Leu"
268      (ix) FEATURE:
269          (A) NAME/KEY: Region
270          (B) LOCATION: 7
271          (D) OTHER INFORMATION: /product= "OTHER"
272 /note= "Xaa at Position 7 is His or Lys"
275      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 9:
W--> 277      Xaa Xaa Xaa Xaa Xaa Xaa Xaa
278          1          5
280 (2) INFORMATION FOR SEQ ID NO: 10:
282      (i) SEQUENCE CHARACTERISTICS:
283          (A) LENGTH: 8 amino acids
284          (B) TYPE: amino acid
285          (C) STRANDEDNESS: single
286          (D) TOPOLOGY: linear
288      (ii) MOLECULE TYPE: peptide
290      (iii) HYPOTHETICAL: NO
295      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 10:

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297     Tyr Leu Lys Asp Gln Gln Leu Leu
298         1             5
300 (2) INFORMATION FOR SEQ ID NO: 11:
302     (i) SEQUENCE CHARACTERISTICS:
303         (A) LENGTH: 8 amino acids
304         (B) TYPE: amino acid
305         (C) STRANDEDNESS: single
306         (D) TOPOLOGY: linear
308     (ii) MOLECULE TYPE: peptide
310     (iii) HYPOTHETICAL: NO
313     (ix) FEATURE:
314         (A) NAME/KEY: Region
315         (B) LOCATION: 1
316         (D) OTHER INFORMATION: /product= "OTHER"
317 /note= "Xaa at Position 1 is Gly, Ser, Thr, Cys, Tyr, Asn, or
318 Gln"
320     (ix) FEATURE:
321         (A) NAME/KEY: Region
322         (B) LOCATION: 2
323         (D) OTHER INFORMATION: /product= "OTHER"
324 /note= "Xaa at Position 2 is Ala, Val, Leu, Ile, Pro, Phe, Trp,
325 or Met"
327     (ix) FEATURE:
328         (A) NAME/KEY: Region
329         (B) LOCATION: 4
330         (D) OTHER INFORMATION: /product= "OTHER"
331 /note= "Xaa at Position 4 is Asp or Glu"
333     (ix) FEATURE:
334         (A) NAME/KEY: Region
335         (B) LOCATION: 5
336         (D) OTHER INFORMATION: /product= "OTHER"
337 /note= "Xaa at Position 5 is Gly, Ser, Thr, Cys, Tyr, Asn, or
338 Gln"
340     (ix) FEATURE:
341         (A) NAME/KEY: Region
342         (B) LOCATION: 6
343         (D) OTHER INFORMATION: /product= "OTHER"
344 /note= "Xaa at Position 6 is Gly, Ser, Thr, Cys, Tyr, Asn, or
345 Gln"
347     (ix) FEATURE:
348         (A) NAME/KEY: Region
349         (B) LOCATION: 7
350         (D) OTHER INFORMATION: /product= "OTHER"
351 /note= "Xaa at Position 7 is Ala, Val, Leu, Ile, Pro, Phe, Trp,
352 or Met"
355     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 11:
W--> 357     Xaa Xaa Lys Xaa Xaa Xaa Xaa Leu
358         1             5

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RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/10/041,977

DATE: 06/03/2002
TIME: 10:31:40

Input Set : N:\Crf3\RULE60\10041977.raw
Output Set: N:\CRF3\06032002\J041977.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:1; Xaa Pos.2,3,4,5,6,7
Seq#:2; Xaa Pos.2,3,4,5,6,7,8
Seq#:3; Xaa Pos.1,2,3,4,5,6,7,8,9
Seq#:4; Xaa Pos.2,3,4,5,6,7
Seq#:5; Xaa Pos.1,2,3,4,5,6,7,8
Seq#:6; Xaa Pos.1,2,3,4,5,6,7
Seq#:7; Xaa Pos.2,3,4,5,6,7,8
Seq#:8; Xaa Pos.1,3,4,5,6,7,8
Seq#:9; Xaa Pos.1,2,3,4,5,6,7
Seq#:11; Xaa Pos.1,2,4,5,6,7

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/041,977

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Input Set : N:\Crf3\RULE60\10041977.raw

Output Set: N:\CRF3\06032002\J041977.raw

L:27 M:220 C: Keyword misspelled or invalid format, [(A) APPLICATION NUMBER:]
L:28 M:220 C: Keyword misspelled or invalid format, [(B) FILING DATE:]
L:64 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:0
L:89 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:0
L:120 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:0
L:140 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:0
L:171 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:0
L:196 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6 after pos.:0
L:221 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7 after pos.:0
L:246 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:0
L:277 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:0
L:357 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11 after pos.:0